

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A production process for a liquid concentrate of adapted and viable bacteria, for use in foodstuffs comprising the following successive steps:

- a) the bacteria are propagated in a fermenter in an appropriate culture medium;
 - b) the bacteria obtained in step a);
 - c) the culture medium containing the bacteria adapted is washed by tangential microfiltration using a washing solution;
 - d) the washed medium containing the bacteria adapted is concentrated in bacteria by tangential microfiltration to a bacterial concentration greater than $5 \cdot 10^{10}$ ufc/ml advantageously greater than $1 \cdot 10^{11}$ ufc/ml;
 - e) a liquid concentrate of adapted and viable bacteria for use in foodstuffs is recovered, and
- wherein adaptation of the bacteria carried out at step b) is shown by measuring parameters of the culture medium and/or bacteria parameters.

2. (Previously Presented) The process as claimed in Claim 1, wherein the bacteria are lactic bacteria, in particular bacteria of *Lactobacillus* spp, *Bifidobacterium* spp., *Streptococcus* spp and *Lactococcus* spp genera.

3. (Previously Presented) The process as claimed claim 1, wherein the culture medium of step a) is a synthetic medium.

4. (Previously Presented) The process as claimed in claim 1, wherein the culture medium containing the bacteria in the fermenter at the end of step a) has a pH between 3 and 6.

5. (Previously Presented) The process as claimed in claim 1, wherein the concentration of bacteria at the end of propagation step a) is greater than 2.10^{10} ufc/ml.

6. (Previously Presented) The process as claimed in Claim 1, wherein the parameters of the culture medium are the pH, the osmotic pressure and/or the temperature of the culture medium.

7. (Previously Presented) The process as claimed in Claim 6 wherein the parameter of the culture medium is the pH and in that the step b) is taken by reducing the pH by natural acidification.

8. (Previously Presented) The process as claimed in Claim 6, wherein the parameter of the culture medium is the temperature, and in that step b) is taken by reducing the temperature.

9. (Previously Presented) The process as claimed in claim 1, wherein the parameter of the bacteria is the size of the bacteria.

10. (Previously Presented) The process as claimed in Claim 1, wherein the distribution of the lengths of each bacterium is predominantly between 0.1 and 10 micrometres, advantageously between 0.5 and 5 micrometres.

11. (Previously Presented) The process as claimed in claim 1, wherein adaptation step b) is taken by tangential microfiltration.

12. (Previously Presented) The process as claim 1, wherein the tangential microfiltration membranes have a porosity between 0.01 and 0.5 μm , advantageously between 0.1 and 0.3 μm .

13. (Previously Presented) The process as claimed in claim 1, wherein in step c) the inlet pressure of the culture medium in the microfiltration module is between 0 and 3.10^5 Pa.

14. (Previously Presented) The process as claimed in claim 1, wherein in steps c) and d) the rate of the permeate is between 0.001 and 0.1 $\text{m}^3/\text{h}/\text{m}^2$ of surface exchange.

15. (Previously Presented) The process as claimed in claim 1, wherein in step d) the transmembrane pressure is between $0.1 \cdot 10^5$ and $2 \cdot 10^5$ Pa and advantageously between $0.1 \cdot 10^5$ and $0.5 \cdot 10^5$ Pa.

16. (Previously Presented) The process as claimed in claim 1, wherein in step d) the recirculation rate of the washed medium is between 0.5 and $3 \text{ m}^3/\text{h}/\text{m}^2$ of exchange surface and advantageously between 0.8 and $1.25 \text{ m}^3/\text{h}/\text{m}^2$ of exchange surface.

17. (Previously Presented) The process as claimed in claim 1, further comprising prior to step a) successive steps of revival and preculture of the bacteria.

18. (Previously Presented) The process as claimed in claim 1, further comprising an additional step f), following step e), of packaging the liquid concentrate of adapted and viable bacteria in flexible and hermetic bags.

19. (Previously Presented) The process as claimed in Claim 18 further comprising an additional step g), following step f), of keeping the liquid concentrate of adapted and viable bacteria packaged in flexible bags and hermetic at a temperature between -50°C and $+4^\circ\text{C}$.

20. (Previously Presented) The process as claimed in Claim 19, further comprising an additional step h), following step g), of reheating by adapted means of the liquid concentrate of adapted and viable bacteria packaged in flexible and hermetic bags.

21. (Previously Presented) A device for executing the process for production of a liquid concentrate of adapted and viable bacteria for use in foodstuffs as claimed in claim 1, comprising a vat (1) containing a washing solution, an inlet conduit (2) of said washing solution in an fermenter (3), said fermenter (3) serving as propagation of the bacteria in a culture medium, an outlet conduit (4) for conveying the culture medium containing the bacteria to one or more modules (5) of tangential microfiltration, said modules (5) allowing separation of said culture medium into a permeate (6) not containing bacteria and into a concentrate (7) containing the bacteria.

22. (Previously Presented) The device as claimed in Claim 21, wherein the concentrate (7) is recycled on leaving the filtration modules (5) by reincorporation into the fermenter (3).

23. (Previously Presented) The device as claimed in claim 21, wherein the filtration modules (5) comprise from 1 to 10 filtration membranes, each membrane representing from 0.1 m² to 150 m² of total filtration surface.

24. (Previously Presented) A liquid concentrate of adapted and viable bacteria, characterised in that it is likely to be obtained by the process as claimed in claim 1.

25. (Previously Presented) A foodstuff comprising the liquid concentrate of adapted and viable bacteria as claimed in claim 24.

26. (Previously Presented) A food product additive comprising a liquid concentrate of adapted and viable bacteria as claimed in Claim 24.

27. (Previously Presented) A milk product and/or beverage comprising the food product additive as claimed in Claim 26.

28. (Currently Amended) A manufacturing production process for an additive food product as claimed in claim 1 ~~claim 26~~, further comprising the step of adding wherein the liquid concentrate of adapted and viable bacteria ~~is added~~ to ~~[[the]]~~ a food product at the end of ~~the~~ a production line and preferably prior to packaging of the food product.